

# Abu Bakr al-Razi

**Abū Bakr al-Rāzī**, also known as **Rhazes**<sup>[a]</sup> (full name: أبو بكر محمد بن زكرياء الرازي, *Abū Bakr Muḥammad ibn Zakariyyā' al-Rāzī*),<sup>[b]</sup> c. 864 or 865–925 or 935 CE,<sup>[c]</sup> was a Persian [physician](#), [philosopher](#) and [alchemist](#) who lived during the [Islamic Golden Age](#). He is widely regarded as one of the most important figures in the history of medicine,<sup>[1]</sup> and also wrote on [logic](#), [astronomy](#) and [grammar](#).<sup>[2]</sup> He is also known for his [criticism of religion](#), especially with regard to the concepts of [prophethood](#) and [revelation](#). However, the religio-philosophical aspects of his thought, which also included a belief in five "eternal principles", are fragmentary and only reported by authors who were often hostile to him.<sup>[3]</sup>

A comprehensive thinker, al-Razi made fundamental and enduring contributions to various fields, which he recorded in over 200 manuscripts, and is particularly remembered for numerous advances in medicine through his [observations](#) and discoveries.<sup>[4]</sup> An early proponent of [experimental medicine](#), he became a successful doctor, and served as chief physician of [Baghdad](#) and [Ray](#) hospitals.<sup>[5][6]</sup> As a teacher of [medicine](#), he attracted students of all backgrounds and interests and was said to be compassionate and devoted to the service of his patients, whether rich or poor.<sup>[7]</sup> Along with [Thabit ibn Qurra](#) (836–901), he was one of the first to clinically distinguish between [smallpox](#) and [measles](#).<sup>[8]</sup>

Through translation, his medical works and ideas became known among medieval European practitioners and profoundly influenced medical education in the Latin West.<sup>[5]</sup> Some volumes of his work *Al-Mansuri*, namely "On Surgery" and "A General Book on Therapy", became part of the medical curriculum in Western universities.<sup>[5]</sup> [Edward Granville Browne](#) considers him as "probably the greatest and most original of all the Muslim physicians, and one of the most prolific as an author".<sup>[9]</sup> Additionally, he has been described as the father of [pediatrics](#),<sup>[10][11]</sup> and a pioneer of [obstetrics](#) and [ophthalmology](#).<sup>[12]</sup>

# Biography



Depiction of al-Razi in a 13th-century manuscript of a work by Gerard of Cremona

Al-Razi was born in the city of Ray (modern Rey, also the origin of his name "al-Razi"),<sup>[13]</sup> into a family of Persian stock and was a native speaker of Persian language.<sup>[14]</sup> Ray was situated on the Great Silk Road that for centuries facilitated trade and cultural exchanges between East and West. It is located on the southern slopes of the Alborz mountain range situated near Tehran, Iran.

In his youth, al-Razi moved to Baghdad where he studied and practiced at the local bimaristan (hospital). Later, he was invited back to Rey by Mansur ibn Ishaq, then the governor of Ray, and became a bimaristan's head.<sup>[5]</sup> He dedicated two books on medicine to Mansur ibn Ishaq, *The Spiritual Physic* and *Al-Mansūrī on Medicine*.<sup>[5][15][16][17]</sup> Because of his newly acquired popularity as physician, al-Razi was invited to Baghdad where he assumed the responsibilities of a director in a

## Abū Bakr al-Rāzī



Portrait by Hossein Behzad, 1962

<b>Born</b>	864 or 865 CE 250 or 251 AH Ray (Iran)
<b>Died</b>	925 (aged 60–61) CE or 935 (aged 70–71) CE 313 or 323 AH Ray (Iran)
<b>Philosophical work</b>	
<b>Era</b>	Islamic Golden Age
<b>Language</b>	Arabic (writings)
<b>Main interests</b>	Medicine, philosophy, alchemy, criticism of religion
<b>Notable ideas</b>	pioneer of obstetrics and ophthalmology, author of the first book on pediatrics, making leading contributions in inorganic and organic



new hospital named after its founder [al-Mu'taḍid](#) (d. 902 CE).<sup>[5]</sup> Under the reign of Al-Mutadid's son, [Al-Muktafi](#) (r. 902–908) al-Razi was commissioned to build a new hospital, which should be the largest of the [Abbasid Caliphate](#). To pick the future hospital's location, al-Razi adopted what is nowadays known as an [evidence-based](#) approach suggesting having fresh meat hung in various places throughout the city and to build the hospital where meat took longest to rot.<sup>[18]</sup>

[chemistry](#), also the author of several philosophical works.

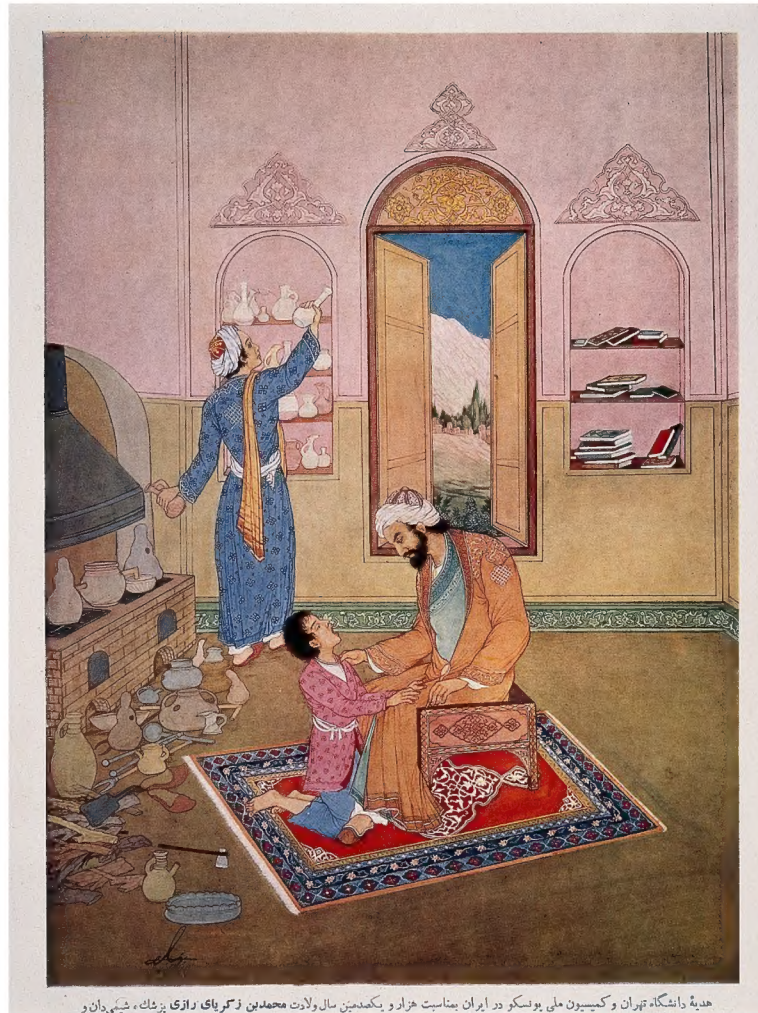
He spent the last years of his life in his native Rey suffering from [glaucoma](#). His eye affliction started with cataracts and ended in total blindness.<sup>[19]</sup> The cause of his blindness is uncertain. One account mentioned by [Ibn Juljul](#) attributed the cause to a blow to his head by his patron, [Mansur ibn Ishaq](#), for failing to provide proof for his alchemy theories;<sup>[20]</sup> while [Abulfaraj](#) and [Casiri](#) claimed that the cause was a diet of beans only.<sup>[21][22]</sup> Allegedly, he was approached by a physician offering an ointment to cure his blindness. Al-Razi then asked him how many layers does the [eye](#) contain and when he was unable to receive an answer, he declined the treatment stating "my eyes will not be treated by one who does not know the basics of its anatomy".<sup>[23]</sup>

The lectures of al-Razi attracted many students. As [Ibn al-Nadim](#) relates in *Fihrist*, al-Razi was considered a [shaikh](#), an honorary title given to one entitled to teach and surrounded by several circles of students. When someone raised a question, it was passed on to students of the 'first circle'; if they did not know the answer, it was passed on to those of the 'second circle', and so on. When all students would fail to answer, al-Razi himself would consider the query. Al-Razi was a generous person by nature, with a considerate attitude towards his patients. He was charitable to the poor, treated them without payment in any form, and wrote for them a treatise *Man La Yaḥḍuruhu al-Ṭabīb*, or *Who Has No Physician to Attend Him*, with medical advice.<sup>[24]</sup> One former pupil from [Tabaristan](#) came to look after him, but as [al-Biruni](#) wrote, al-Razi rewarded him for his intentions and sent him back home, proclaiming that his final days were approaching.<sup>[25]</sup> According to Biruni, al-Razi died in Rey in 925 sixty years of age.<sup>[26]</sup> Biruni, who considered al-Razi his mentor, among the first penned a short biography of al-Razi including a bibliography of his numerous works.<sup>[26]</sup>

[Ibn al-Nadim](#) recorded an account by al-Razi of a [Chinese](#) student who copied down all of [Galen's](#) works in [Chinese](#) as al-Razi read them to him out loud after the student learned fluent Arabic in 5 months and attended al-Razi's lectures.<sup>[27][28][29][30]</sup>

After his death, his fame spread beyond the Middle East to Medieval Europe, and lived on. In an undated catalog of the library at [Peterborough Abbey](#), most likely from the 14th century, al-Razi is listed as a part author of ten books on medicine.<sup>[31]</sup>

# Contributions to medicine



al-Razi examining a patient (miniature painting by [Hossein Behzad](#), 1894–1968)

## Psychology and psychotherapy

Al-Razi was one of the world's first great medical experts. He is considered the father of psychology and psychotherapy.<sup>[32]</sup>

## Smallpox vs. measles

Al-Razi's book *al-Judari wa l-ḥaṣba* "On Smallpox and Measles", is, along with a book of the same name by [Thabit ibn Qurra](#) (836–901), among the earliest extant books describing [smallpox](#) and [measles](#) as distinct diseases.<sup>[33]</sup> Smallpox was not known in [ancient Greek medicine](#). It was likely differentiated from measles and other similar diseases by authors in [late antiquity](#) writing in [Medieval Greek](#) and [Syriac](#), whose works were known to Thabit and al-Razi.<sup>[34]</sup>

Al-Razi's work was translated into Syriac and then into Greek. It became known in Europe through this translation, as well as Latin translations based on the Greek text, and was later translated



into several European languages.<sup>[35]</sup> Neither the date nor the author of the Syriac and Greek versions is known; but the Greek was created at the request of one of the [Byzantine emperors](#).<sup>[35]</sup>

## Meningitis

Al-Razi compared the outcome of patients with [meningitis](#) treated with [blood-letting](#) with the outcome of those treated without it to see if blood-letting could help.<sup>[36]</sup>

## Pharmacy

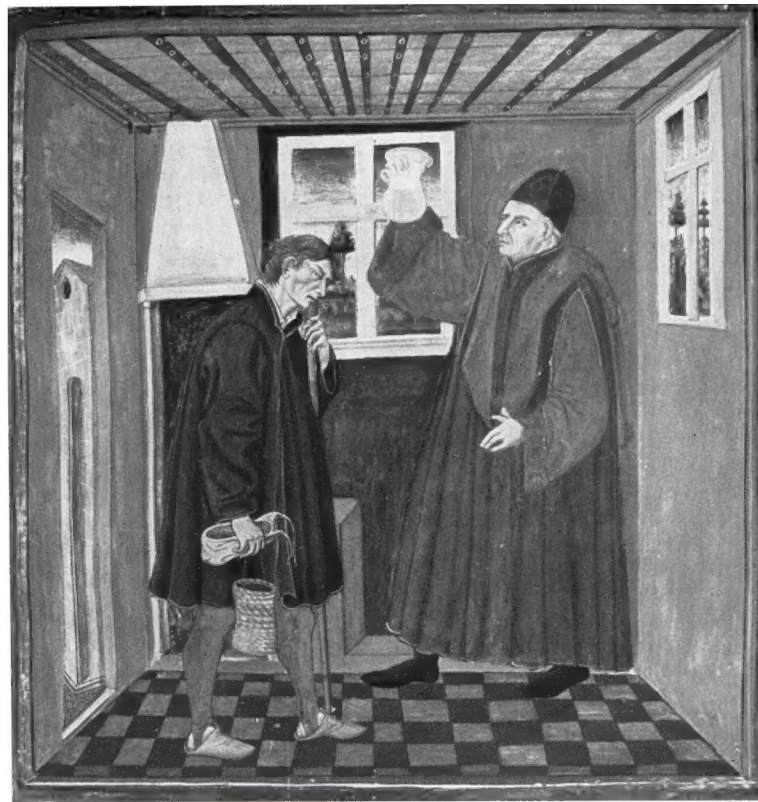
Al-Razi contributed in many ways to the early practice of [pharmacy](#)<sup>[37]</sup> by compiling texts, in which he introduces the use of "[mercurial](#) ointments" and his development of apparatus such as mortars, flasks, spatulas and phials, which were used in pharmacies until the early twentieth century.

## Ethics of medicine

On a professional level, al-Razi introduced many practical, progressive, medical and psychological ideas. He attacked [charlatans](#) and fake doctors who roamed the cities and countryside selling their [nostrums](#) and "cures". At the same time, he warned that even highly educated doctors did not have the answers to all medical problems and could not cure all sicknesses or heal every disease, which was humanly speaking impossible. To become more useful in their services and truer to their calling, al-Razi advised practitioners to keep up with advanced knowledge by continually studying medical books and exposing themselves to new information. He made a distinction between curable and incurable diseases. Pertaining to the latter, he commented that in the case of advanced cases of cancer and [leprosy](#) the physician should not be blamed when he could not cure them. To add a humorous note, al-Razi felt great pity for physicians who took care for the well being of princes, nobility, and women, because they did not obey the doctor's orders to restrict their diet or get medical treatment, thus making it most difficult being their physician.

He also wrote the following on [medical ethics](#):

The doctor's aim is to do good, even to our enemies, so much more to our friends, and my profession forbids us to do harm to our kindred, as it is instituted for the benefit and welfare of the human race, and God imposed on physicians the oath not to compose mortiferous remedies.<sup>[38]</sup>



Doctor performing [uroscopy](#) (from a Latin translation of a work by al-Razi, 1466)

## Books and articles on medicine

### *Al-Hawi*

**Arabic:** الحاوي, **romanized:** *al-Hāwī*, **lit.** 'The Comprehensive [Book on Medicine]' This 23-volume medical textbook sets the foundation of [gynecology](#), [obstetrics](#), [oncology](#) and [chemotherapy](#), and [ophthalmic surgery](#).<sup>[32]</sup> It also contains considerations and criticism on [Aristotle](#) and [Plato](#) and expresses innovative views on many subjects.<sup>[39][40][41]</sup> Because of this book alone, many scholars consider al-Razi the greatest medical doctor of the [Middle Ages](#).

*Al-Hawi* is not a formal medical encyclopedia but a posthumous compilation of al-Razi's working notebooks, which included knowledge gathered from other books as well as original observations on diseases and therapies based on his own clinical experience. It is significant since it contains a monograph on smallpox, one of the earliest known. It was translated into Latin in 1279 by [Faraj ben Salim](#), a physician of Sicilian-Jewish origin employed by [Charles of Anjou](#), and after which it had a considerable influence in Europe.

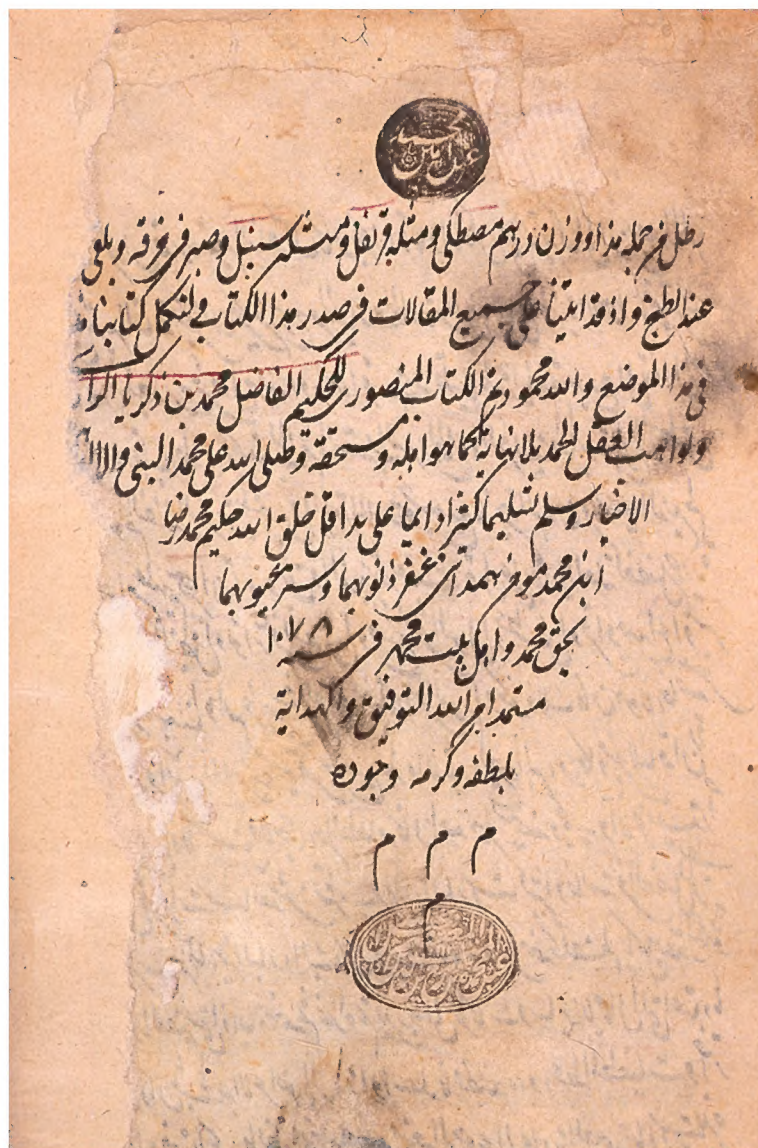
*Al-Hawi* also criticized the views of [Galen](#) after al-Razi had observed many clinical cases that did not follow Galen's descriptions of fevers. For example, he stated that Galen's descriptions of [urinary ailments](#) were inaccurate as he had only seen three cases, while al-Razi had studied hundreds of such cases in [hospitals](#) of [Baghdad](#) and Rey.<sup>[42]</sup>

### ***For One Who Has No Physician to Attend Him (Man la Yahduruhu Al-Tabib) (من لا يحضره الطبيب)***

Al-Razi was possibly the first Persian doctor to deliberately write a home medical manual (remedial) directed at the general public. He dedicated it to the poor, the traveller, and the ordinary citizen who could consult it to treat common ailments when a doctor was unavailable. This book is of special interest to the history of pharmacy since similar books were very popular until the 20th century. Al-Razi described in its 36 chapters diets and drug components that can be found in either an apothecary, a marketplace, in well-equipped kitchens, or military camps. Thus, every intelligent person could follow its instructions and prepare the proper recipes with good results.

Some of the illnesses treated were headaches, colds, coughing, melancholy and diseases of the eye, ear, and stomach. For example, he prescribed for a feverish headache: "2 parts of *duhn* (oily extract) of *rose*, to be mixed with 1 part of vinegar, in which a piece of *linen* cloth is dipped and compressed on the forehead". He recommended as a *laxative*, "7 *drams* of dried *violet* flowers with 20 pears, *macerated* and well mixed, then strained. Add to this *filtrate* 20 drams of sugar for a drink." In cases of melancholy, he invariably recommended prescriptions, which included either *poppies* or its juice (*opium*), *Cuscuta epithymum* (clover dodder) or both. For an eye-remedy, he advised *myrrh*, *saffron*, and *frankincense*, 2 drams each, to be mixed with 1 dram of *yellow arsenic* formed into *tablets*. Each tablet was to be dissolved in sufficient *coriander* water and used as eye drops.





Colophon of al-Razi's *Book of Medicine for Mansur*

### ***Book for al-Mansur (Kitāb al-Manṣūrī)***

Al-Razi dedicated this work to his patron [Abū Ṣāliḥ al-Manṣūr](#), the [Samanid](#) governor of Ray.<sup>[43]</sup> It was translated into Latin by [Gerard of Cremona](#) around 1180.<sup>[44]</sup> A Latin translation of it was edited in the 16th century by the Dutch anatomist and physician [Andreas Vesalius](#).<sup>[13]</sup>

### ***Doubts about Galen (al-Shukūk ‘alā Jalīnūs)***

In his book *Doubts about Galen*,<sup>[45]</sup> al-Razi rejects several claims made by the Greek physician, as far as the alleged superiority of the [Greek language](#) and many of his [cosmological](#) and medical views. He links medicine with philosophy, and states that sound practice demands independent thinking. He reports that Galen's descriptions do not agree with his own clinical observations regarding the run of a fever. And in some cases he finds that his clinical experience exceeds Galen's.

He criticized Galen's theory that the body possessed four separate "[humors](#)" whose balance is the key to health and a natural body temperature. A sure way to upset such a system was to insert a liquid with a different temperature into the body, resulting in an increase or decrease of



bodily heat, which resembled the temperature of that particular fluid. Al-Razi noted that a warm drink would heat the body much higher than its natural temperature. Thus, the drink would trigger a response from the body rather than transferring only its warmth or coldness to it. (Cf. I. E. Goodman)

This line of criticism could completely refute Galen's theory of humors and Aristotle's theory of the [classical elements](#) on which it was grounded. Al-Razi's alchemical experiments suggested other qualities of matter, such as "oiliness" and "sulphurousness", or [inflammability](#) and [salinity](#), which were not readily explained by the traditional fire, water, earth, and air division of elements.

Al-Razi's challenge to the current fundamentals of medical theory was quite controversial. Many accused him of ignorance and arrogance, even though he repeatedly expressed his praise and gratitude to Galen for his contributions and labours, saying:

I prayed to God to direct and lead me to the truth in writing this book. It grieves me to oppose and criticize the man [Galen](#) from whose sea of knowledge I have drawn much. Indeed, he is the Master and I am the disciple. Although this reverence and appreciation will and should not prevent me from doubting, as I did, what is erroneous in his theories. I imagine and feel deeply in my heart that Galen has chosen me to undertake this task, and if he were alive, he would have congratulated me on what I am doing. I say this because Galen's aim was to seek and find the truth and bring light out of darkness. I wish indeed he were alive to read what I have published.<sup>[46]</sup>

### ***The Diseases of Children***

Al-Razi's *The Diseases of Children* was the first monograph to deal with [pediatrics](#) as an independent field of medicine.<sup>[10][11]</sup>

# Alchemy



al-Razi in his laboratory (orientalist painting by Ernest Board, c. 1912)

## The transmutation of metals

Al-Razi's interest in alchemy and his strong belief in the possibility of [transmutation](#) of lesser metals to silver and gold was attested half a century after his death by [Ibn an-Nadim](#)'s book, *The Philosopher's Stone* (*Lapis Philosophorum* in Latin). Nadim attributed a series of twelve books to al-Razi, plus an additional seven, including his refutation to [al-Kindi](#)'s denial of the validity of alchemy. Al-Kindi (801–873 CE) had been appointed by the Abbasid Caliph Ma'mun founder of Baghdad, to 'the [House of Wisdom](#)' in that city, he was a philosopher and an opponent of alchemy. Al-Razi's two best-known alchemical texts, which largely superseded his earlier ones: *al-Asrar* (الاسرار "The Secrets"), and *Sirr al-Asrar* (سر الاسرار "The Secret of Secrets"), which incorporates much of the previous work.

Apparently al-Razi's contemporaries believed that he had obtained the secret of turning iron and copper into gold. Biographer Khosro Moetazed reports in *Mohammad Zakaria Razi* that a certain General Simjur confronted al-Razi in public, and asked whether that was the underlying reason



for his willingness to treat patients without a fee. "It appeared to those present that al-Razi was reluctant to answer; he looked sideways at the general and replied":

I understand alchemy and I have been working on the characteristic properties of metals for an extended time. However, it still has not turned out to be evident to me, how one can transmute gold from copper. Despite the research from the ancient scientists done over the past centuries, there has been no answer. I very much doubt if it is possible...

## Major works on alchemy

Al-Razi's works present the first systematic classification of carefully observed and verified facts regarding chemical substances, reactions and apparatus, described in a language almost entirely free from mysticism and ambiguity.

### ***The Secrets (Al-Asrar)***

'The Secrets' (*al-Asrar*, *Kitāb al-Asrār*, 'Book of Secrets') was written in response to a request from al-Razi's close friend, colleague, and former student, Abu Muhammad ibn Yunis [al-Bukhari](#), a Muslim mathematician, philosopher, and [natural scientist](#).

### ***Secret of Secrets (Sirr al-Asrar)***

This is al-Razi's most famous book. Here he gives systematic attention to basic chemical operations important to the history of pharmacy. In this book al-Razi divides the subject of "[matter](#)" into three categories, as in his previous book *Al-Asrar*.

1. Knowledge and identification of the medical components within substances derived from plants, animals, and minerals, and descriptions of the best types for medical treatments.
2. Knowledge of equipment and tools of interest to and used by either alchemists or [apothecaries](#).
3. Knowledge of seven [alchemical](#) procedures and techniques: sublimation and condensation of [mercury](#), precipitation of sulfur, and arsenic calcination of [minerals](#) (gold, silver, copper, lead, and iron), salts, glass, [talc](#), [shells](#), and [waxing](#).

This last category contains additional descriptions of other methods and applications used in [transmutation](#):

- The added mixture and use of solvent vehicles.
- The amount of heat (fire) used, 'bodies and stones', (*al-ajsad* and *al-ahjar*) that can or cannot be transmuted into corporal substances such of metals and salts (*al-amlah*).

- The use of a liquid **mordant** which quickly and permanently colors lesser metals for more lucrative sale and profit.

Similar to the commentary on the 8th century text on **amalgams** ascribed to **Jabir ibn Hayyan**, al-Razi gives methods and procedures of coloring a silver object to imitate gold (**gold leafing**) and the reverse technique of removing its color back to silver. **Gilding** and **silvering** of other metals (**alum**, calcium salts, iron, copper, and **tutty**) are also described, as well as how colors will last for years without tarnishing or changing.

Al-Razi classified minerals into six divisions:

1. Four spirits (*al-arwah*): **mercury**, **sal ammoniac**, **sulphur**, and arsenic sulphide (**orpiment** and **realgar**).
2. **Seven bodies** (*al-ajsad*): silver, gold, copper, iron, black lead (*plumbago*), **zinc** (*kharsind*), and **tin**.
3. Thirteen **stones** (*al-ahjar*): **Marcasite** (*marqashita*), **magnesia**, **malachite**, **tutty** (*tutiya*, zinc oxide), **talcum**, **lapis lazuli**, **gypsum**, **azurite**, **haematite** (iron oxide), arsenic oxide, **mica**, **asbestos**, and glass (then identified as made of sand and alkali of which the transparent crystal damascene is considered the best).
4. Seven **vitriols** (*al-zajat*): **alum** (*al-shabb* الشب), and white (*qalqadis* القلقديس), black, red (*suri* السوري), and yellow (*qulqutar* القلقطار) vitriols (the impure sulfates of iron, copper, etc.), green (*qalqand* القلقند).
5. Seven **borates**: **natron**, and impure sodium borate.
6. Eleven salts (*al-amlah*): including brine, **common salt**, **ashes**, **naphtha**, live **lime**, and **urine**, **rock**, and **sea salts**. Then he separately defines and describes each of these substances, the best forms and colours of each, and the qualities of various adulterations.

Al-Razi gives also a list of apparatus used in alchemy. This consists of 2 classes:

1. Instruments used for the dissolving and melting of metals such as the blacksmith's hearth, bellows, crucible, thongs (tongue or ladle), **macerator**, stirring rod, cutter, grinder (pestle), file, shears, **descensory**, and semi-cylindrical iron mould.
2. Utensils used to carry out the process of transmutation and various parts of the distilling apparatus: the retort, **alembic**, shallow iron pan, potters kiln and blowers, large oven, cylindrical stove, glass cups, flasks, **phials**, beakers, glass funnel, crucible, **aludel**, heating lamps, mortar, cauldron, hair-cloth, sand- and water-bath, sieve, flat stone mortar and chafing-dish.



# Philosophy

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Although al-Razi wrote extensively on philosophy, most of his works on this subject are now lost.<sup>[47]</sup> Most of his religio-philosophical ideas, including his belief in five "eternal principles", are only known from fragments and testimonies found in other authors, who were often strongly opposed to his thought.<sup>[48]</sup>

## Metaphysics

Al-Razi's metaphysical doctrine derives from the theory of the "five eternal", according to which the world is produced out of an interaction between God and four other eternal principles (soul, matter, time, and place).<sup>[49]</sup> He accepted a pre-socratic type of atomism of the bodies, and for that he differed from both the *falasifa* and the *mutakallimun*.<sup>[49]</sup> While he was influenced by Plato and the medical writers, mainly Galen, he rejected *taqlid* and thus expressed criticism about some of their views. This is evident from the title of one of his works, *Doubts About Galen*.<sup>[49]</sup>

## Views on religion

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A number of contradictory works and statements about religion have been ascribed to al-Razi. Many sources claim that al-Razi viewed prophecy and revealed religion as unnecessary and delusional, claiming that all humans have the ability to access and discover truth (including the existence of God) through God-given reason.<sup>[50][51][52][53]</sup> According to these sources, his skepticism of prophecy and view that no one group or religion has privileged access to the truth is driven by his view that all people have an equal basic capacity for rationality and discovery of truth, and that apparent differences in this capacity are simply a feature of interest, opportunity, and effort.<sup>[54][52]</sup> Because of his supposed rejection of prophecy and acceptance of reason as the primary method for accessing the truth, al-Razi came to be admired as a *freethinker* by some.<sup>[55][53]</sup>

According to al-Biruni's *Bibliography of al-Razi (Risāla fī Fihrist Kutub al-Rāzī)*, al-Razi wrote two "heretical books": "*Fi al-Nubuwwāt (On Prophecies)* and "*Fi Ḥiyal al-Mutanabbīn (On the Tricks of False Prophets)*. According to Biruni, the first "was claimed to be against religions" and the second "was claimed as attacking the necessity of the prophets."<sup>[56]</sup> However, Biruni also listed some other works of al-Razi on religion, including *Fi Wujub Da'wat al-Nabi 'Ala Man Nakara bi al-Nubuwwat (Obligation to Propagate the Teachings of the Prophet Against Those who Denied Prophecies)* and *Fi anna li al-Insan Khaliqan Mutqinan Hakim* (*That Man has a Wise and Perfect Creator*), listed under his works on the "divine sciences".<sup>[56]</sup> None of his works on religion are now extant in full.

Sarah Stroumsa has argued that al-Razi was a freethinker who rejected all revealed religions.<sup>[57]</sup> However, Peter Adamson, Marwan Rashed and others hold that al-Razi did not reject revealed religion, on the basis of more recent evidence found in the writings of the theologian and philosopher Fakhr al-Din al-Razi (died 1210).<sup>[58]</sup> Adamson states:



al-Razi as depicted by Veloso Salgado  
(c. 1906)

It is worth noting that Stroumsa's work predates Rashed's discovery of this evidence in Fakhr al-Dīn, so that she did not have the benefit of being able to consider how this new information could be reconciled with the Proofs. That is the goal I will set for myself in this chapter. I should lay my cards on the table and say that I am persuaded by Rashed's account, and do not believe that Razi was staging a general attack on prophecy or religion as Abū Ḥatīm would have us think.<sup>[59]</sup>

## Debate with Abu Hatim

The views and quotes that are often ascribed to al-Razi where he appears to be critical of religion are found in a book written by Abu Hatim al-Razi, called *A'lām al-nubuwwa* (Signs of Prophecy), which documents a debate between Abu Hatim and al-Razi. Abu Hatim was an Isma'ili missionary who debated al-Razi, but whether he has faithfully recorded the views of al-Razi is disputed.<sup>[49]</sup> Some historians claim that Abu Hatim accurately represented al-Razi's scepticism of revealed religion while others argue that Abu Hatim's work should be treated with scepticism given that he is a hostile source of al-Razi's beliefs and might have portrayed him as a heretic to discount his critique of the Ismā'īlīs.<sup>[60]</sup>

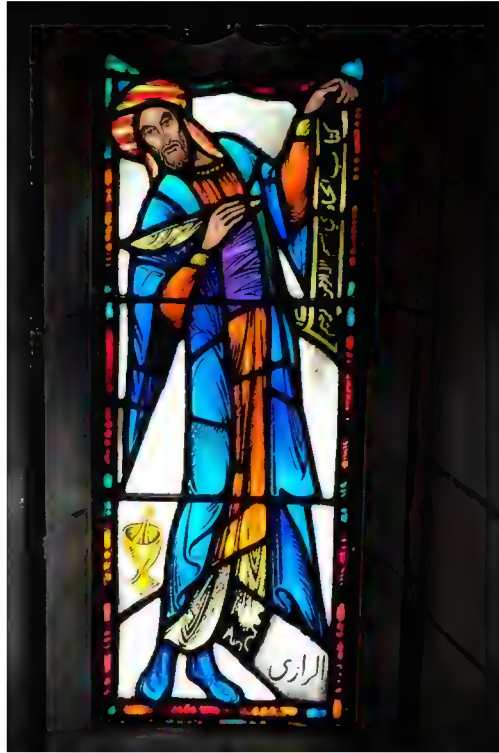


According to Abdul Latif al-'Abd, Islamic philosophy professor at Cairo University, Abu Hatim and his student, [Ḥamīd al-dīn Karmānī](#) (d. after 411AH/1020CE), were Isma'ili extremists who often misrepresented the views of al-Razi in their works.<sup>[61][62]</sup> This view is also corroborated by early historians like [al-Shahrastani](#) who noted "that such accusations should be doubted since they were made by Ismā'īlīs, who had been severely attacked by Muḥammad ibn Zakariyyā Rāzī".<sup>[60]</sup> Al-'Abd points out that the views allegedly expressed by al-Razi contradict what is found in al-Razi's own works, like the *Spiritual Medicine* (*Fī al-ṭibb al-rūḥānī*).<sup>[61]</sup> Peter Adamson concurs that Abu Hatim may have "deliberately misdescribed" al-Razi's position as a rejection of Islam and revealed religions. Instead, al-Razi was only arguing against the use of miracles to prove [Muhammad's](#) prophecy, [anthropomorphism](#), and the uncritical acceptance of *taqlīd* vs *naẓar*.<sup>[49]</sup> Adamson points out to a work by [Fakhr al-din al-Razi](#) where al-Razi is quoted as citing the [Quran](#) and the prophets to support his views.<sup>[49]</sup>

In contrast, earlier historians such as [Paul Kraus](#) and Sarah Stroumsa accepted that the extracts found in Abu Hatim's book were either said by al-Razi during a debate or were quoted from a now lost work. According to the debate with Abu Hatim, al-Razi denied the validity of prophecy or other authority figures, and rejected prophetic miracles. He also directed a scathing critique on revealed religions and the miraculous quality of the Quran.<sup>[49][63]</sup> They suggest that this lost work is either his famous *al-'Ilm al-Ilāhī* or another shorter independent work called *Makharīq al-Anbiyā'* (*The Prophets' Fraudulent Tricks*).<sup>[64][65]</sup> Abu Hatim, however, did not explicitly mention al-Razi by name in his book, but referred to his interlocutor simply as the *mulḥid* (lit. 'heretic').<sup>[49][61]</sup>

## Criticism

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Stained-glass window depicting al-Razi  
(Princeton University Chapel,  
c. 1924–1928)

Al-Razi's religious and philosophical views were later criticized by [Abu Rayhan Biruni](#) and [Avicenna](#) in the early 11th century. Biruni in particular wrote a short treatise (*risala*) dealing with al-Razi, criticizing him for his sympathy with [Manichaeism](#),<sup>[66]</sup> his [Hermetical](#) writings, his religious and philosophical views,<sup>[67]</sup> for refusing to [mathematize physics](#), and his active opposition to [mathematics](#).<sup>[68]</sup> Avicenna, who was himself a physician and philosopher, also criticized al-Razi.<sup>[69]</sup> During a debate with Biruni, Avicenna stated:

Or from Muhammad ibn Zakariyya al-Razi, who meddles in [metaphysics](#) and exceeds his competence. He should have remained confined to surgery and to [urine](#) and [stool testing](#)—indeed he exposed himself and showed his ignorance in these matters.<sup>[70]</sup>

[Nasr-i-Khosraw](#) posthumously accused him of having plagiarized [Iranshahri](#), whom Khosraw considered the master of al-Razi.<sup>[71]</sup>

## Legacy

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The modern-day [Razi Institute](#) in [Karaj](#) and [Razi University](#) in [Kermanshah](#) were named after him. A "Razi Day" ("Pharmacy Day") is commemorated in Iran every 27 August.<sup>[72]</sup>



In June 2009, [Iran](#) donated a "Scholars Pavilion" or Chartagi to the [United Nations Office in Vienna](#), now placed in the central Memorial Plaza of the [Vienna International Center](#).<sup>[73]</sup> The pavilion features the statues of al-Razi, [Avicenna](#), [Abu Rayhan Biruni](#), and [Omar Khayyam](#).<sup>[74][75]</sup>

[George Sarton](#) remarked him as "greatest physician of Islam and the Medieval Ages".<sup>[76]</sup>

## See also

- [List of Iranian scientists](#)
- [Medical Encyclopedia of Islam and Iran](#)*
- [Medical literature](#)

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### Notes

- His name was [rendered in Latin](#) as either **Rhazes** or **Rhasis**. In modern academic literature he is also often referred to as **Razi**.
- For the spelling of his Arabic name, see for example [Kraus 1939](#). Sometimes it is also spelled زكریا (*Zakariyyā*) rather than زکریاء (*Zakariyyā*), as for example in [Dānish-pazhūh 1964](#), p. 1 of the edition, or in [Mohaghegh 1993](#), p. 5. In modern [Persian](#) his name is rendered as ابوبکر محمدبن زکریا رازی (see [Dānish-pazhūh 1964](#), p. 1 of the introduction), though instead of زکریا one may also find زکریای (see [Mohaghegh 1993](#), p. 18).
- For his date of birth, [Kraus & Pines 1913–1936](#) give 864 CE / 250 AH ([Goodman 1960–2007](#) gives 854 CE / 250 AH, but this is a typo), while [Richter-Bernburg 2003](#) and [Adamson 2021a](#) give 865 CE / 251 AH. For his date of death as 925 or 935 CE / 313 or 323 AH, see [Goodman 1960–2007](#); some sources only give 925 CE / 313 AH ([Walker 1998](#); [Richter-Bernburg 2003](#); [Adamson 2021a](#)).

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## External links

- ["Dr Al Razi's city tour of Baghdad \(https://soundcloud.com/user-542495654-897696505/city-to-ur-baghdad\) ."](#) Educational podcast released by the Leiden Learning & Innovation Centre as part of the Massive Open Online Course "Cosmopolitan Medieval Arabic World."
- [Peter Adamson. "Abu Bakr al-Razi" \(https://plato.stanford.edu/entries/abu-bakr-al-razi/\) .](#) In [Zalta, Edward N. \(ed.\). \*Stanford Encyclopedia of Philosophy\*.](#)
- ["al-Razi" on Islamic Philosophy Online \(http://www.muslimphilosophy.com/ip/rep/H043\) ,](#) encyclopedia article about al-Razi by Paul E. Walker.
- [Lives of the Physicians \(http://www.wdl.org/en/item/7476\) ,](#) dating from 1882, features a biography, in Arabic, about Rhazes.